

KEYWORDS : CAPSULE; ENCAPSULATE

Item 85

TITLE : OIL-CONTAINING MICROSCOPIC CAPSULES AND METHOD OF MAKING THEM
PATENT NUMBER : 2800458
PATENT COUNTRY : US
INVENTOR(S) : GREEN B K
ASSIGNEE : NATIONAL CASH REGISTER CO
KEYWORDS : CAPSULE; ENCAPSULATE

Item 86

TITLE : OIL-CONTAINING MICROSCOPIC CAPSULES AND METHOD OF MAKING THEM
PATENT NUMBER : RE24899
PATENT COUNTRY : US
INVENTOR(S) : GREEN B K
ASSIGNEE : NATIONAL CASH REGISTER CO
KEYWORDS : CAPSULE; ENCAPSULATE

Item 87

TITLE : IMPROVEMENTS IN OR RELATING TO CIGARETTES, CIGARS, CHERROOTS AND THE LIKE
PATENT NUMBER : 835923
PATENT COUNTRY : GB
INVENTOR(S) : SANDERSON D E
ASSIGNEE : NONE GIVEN
ABSTRACT : EXTINGUISHING AGENT PLACED NEAR THE BUTT END OF THE ROD, E.G., ENCAPSULATED WETTING LIQUID IN HEAT MELTABLE CASING, OR UNDISCLOSED SUBSTANCE TO SMOTHER OR SNUFF OUT COMBUSTION.
KEYWORDS : SAFETY; SELF-EXTINGUISH; CAPSULE; GEL; WATER

Item 88

TITLE : PROCESS FOR FLAVORING TOBACCO
PATENT NUMBER : 4617945
PATENT COUNTRY : US
INVENTOR(S) : VOS C; BRASSER J
ASSIGNEE : NAARDEN INTERNATIONAL N V
ABSTRACT : MICRO-ENCAPSULATED FLAVOR IS ADDED TO TOBACCO BY MIXING THE TOBACCO WITH THE CAPSULES AND AN AQUEOUS ADHESIVE SOLUTION. THE SOLUTION CONTAINS WATER IN A QUANTITY WHICH IS SUFFICIENT TO BE ADSORBED BY THE DRY TOBACCO. MIXING IS CONTINUED UNTIL A DRY PRODUCT IS OBTAINED.
KEYWORDS : MICROENCAPSULATE; COCOA; DRY BLEND; ADDITIVE; COAT; CASE; PARTICLE SIZE; BINDER; GUM ARABIC; SUGAR; ORGANIC SOLVENT

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Item 89

TITLE : MODERATING AGENT OF CIGARETTE TASTE
PATENT NUMBER : 4620554
PATENT COUNTRY : US
INVENTOR(S) : HORIMOTO Y
ASSIGNEE : LUXEORD CO
ABSTRACT : FLAVORING AGENT WHICH IS APPLIED TO THE TOP END OF THE CIGARETTE, ALSO PROVIDES A REDUCTION IN NICOTINE. THE AGENT COMPRISES A POWDER COMPOSED OF ASCORBIC ACID OR ITS ISOMER, DRIED POWDERED COMFREY LEAVES, WHEAT PROTEIN, BEEFSTEAK PLANT, PEPPERMINT AND AN ENCAPSULATED POWDER OF VEGETABLE OIL.
KEYWORDS : FLAVOR; APPLY; TOBACCO; VITAMIN C; ADDITIVE; CHLOROPHYLL; POTASSIUM NITRATE; VITAMIN B

Item 90

TITLE : STARCH MATRIX MATERIAL CONTAINING IMBEDDED MATERIAL AND PROCESS FOR PREPARING SAME
PATENT NUMBER : 2876160
PATENT COUNTRY : US
INVENTOR(S) : SCHOCH T J; SPENCER C C
ASSIGNEE : CORN PRODUCTS
ABSTRACT : METHOD OF DISPERSING WATER-INSOLUBLE MATERIALS, IN SOLUTIONS OF SPECIFIC STARCHES OR DERIVATIVES THEREOF, AND THEN DRYING THE RESULTANT DISPERSION IN ORDER TO PRODUCE NEW AND NOVEL DRY PRODUCTS IN WHICH THE DISPERSED PHASE IS IMBEDDED IN A STARCHY MATRIX AND IS PROTECTED FROM AIR OXIDATION, CHEMICAL CHANGES, EVAPORATION, ETC.
KEYWORDS : HYDROLYZE; DERIVATIVE; ENCAPSULATE; WATER-SOLUBLE

Item 91

TITLE : FRAGRANCE-RELEASING MICROCAPSULES ON A SEE-THROUGH SUBSTRATE
PATENT NUMBER : 4493869
PATENT COUNTRY : US
INVENTOR(S) : SWEENEY N P; RELYEA K E; BRUSTAD W L
ASSIGNEE : MINNESOTA MINING AND MANUFACTURING
ABSTRACT : APPLIQUES HAVE ENCAPSULATED FLAVOR OR AROMA IN A BINDER ON ONE LAYER AND AN ADHESIVE ON THE OTHER. POLYMERIC BINDER SUCH AS UREA-FORMALDEHYDE RESIN AND ACRYLIC ADHESIVE.
KEYWORDS : FLAVOR RELEASE; ADHESIVE; VISUAL IMAGE; RUPTURE; BREAK; MICROENCAPSULATE; ENCAPSULATE; SEAL; TAPE; PATCH; NOVELTY; TEAR TAPE; TEAR STRIP

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Item 93

TITLE : FRAGRANCE-RELEASING PULL-APART SHEET
PATENT NUMBER : 4487801
PATENT COUNTRY : US
INVENTOR(S) : TURNBULL E M; CHARBONNEAU J W
ASSIGNEE : MINNESOTA MINING AND MANUFACTURING
ABSTRACT : MICROCAPSULES CONTAINING MATERIAL THEREIN CAN BE BURST TO
RELEASE THE ENCAPSULATED MATERIAL WHEN THE CAPSULES ARE
CONTAINED IN AN ADHESIVE SECURING TWO SURFACES TOGETHER
AND THE SURFACES ARE PULLED APART. NOT INTENDED TO BE
REBONDABLE OR RECLOSABLE.
KEYWORDS : MICROCAPSULE; RUPTURE; FLAVOR RELEASE; AROMA; LAYER;
LAMINATE; COLOR; AEROSOL; PACKAGING; PAPER; TENSILE
STRENGTH; MOISTURE ACTIVATED; POLYMER; TAMPER EVIDENT

Item 94

TITLE : PREPARATION OF SOLID FLAVORING COMPOSITIONS
PATENT NUMBER : 2856291
PATENT COUNTRY : US
INVENTOR(S) : SCHULTZ T H
ASSIGNEE : USA
KEYWORDS : FLAVOR; ENCAPSULATE; OIL; SUGAR

Item 95

TITLE : PRODUCTION OF FLAVORING OIL COMPOSITIONS
PATENT NUMBER : 2857281
PATENT COUNTRY : US
INVENTOR(S) : SCHULTZ T H; BROWN A H; WALKER L H
ASSIGNEE : USA
KEYWORDS : FLAVOR; ENCAPSULATE; SUGAR; EMULSION

Item 73

TITLE : BEVERAGE COMPOSITIONS
PATENT NUMBER : 1082039
PATENT COUNTRY : CA
INVENTOR(S) : JOHNSON R S; POTTER J K
ASSIGNEE : UNILEVER
ABSTRACT : DRY POWDERED CONCENTRATE, SUCH AS TEA AND COFFEE, IN
WHICH WATER-SOLUBLE FLAVORANT GRANULES ARE COATED WITH
INSOLUBLE POWDERED BEVERAGE.
KEYWORDS : COMPOSITION; POWDER; WATER-SOLUBLE; FLAVOR; GRANULE;
COLOR; ADHERE; BAG; ESSENTIAL OIL; ENCAPSULATE

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Item 96

TITLE : ELECTROSTATIC ENCAPSULATION
PATENT NUMBER : 3208951
PATENT COUNTRY : US
INVENTOR(S) : BERGER B B; MILLER C D; LANGER G
ASSIGNEE : IIT RESEARCH INSTITUTE
ABSTRACT : ENCAPSULATION OF A LIQUID BY A SOLID BY ATOMIZING BOTH.
ACHIEVED BY ELECTROSTATIC INTERACTION OF AEROSOL
PARTICLES.
KEYWORDS : ENCAPSULATE; ATOMIZE; PARTICLE; CHARGE; MIST

Item 97

TITLE : MICROCAPSULES, PROCESS FOR THEIR FORMATION AND TRANSFER
SHEET RECORD MATERIAL COATED THEREWITH
PATENT NUMBER : 3418656
PATENT COUNTRY : US
INVENTOR(S) : VASSILIADES A E
ASSIGNEE : U.S. PLYWOOD-CHAMPION PAPERS
ABSTRACT : PROCESSES FOR ENCAPSULATING MINUTE OIL-IN-WATER EMULSION
DROPLETS, THE PRODUCTS PRODUCED THEREBY, AND THE UTILITY
THEREOF IN PRESSURE-RESPONSIVE, TRANSFER-COPY SYSTEMS.
KEYWORDS : MICROCAPSULE; MICROENCAPSULATE; ENCAPSULATE; DROPLET

Item 98

TITLE : MICROCAPSULES, PROCESS FOR THEIR FORMATION AND TRANSFER
SHEET RECORD MATERIAL COATED THEREWITH
PATENT NUMBER : 3418250
PATENT COUNTRY : US
INVENTOR(S) : VASSILIADES A E
ASSIGNEE : U.S. PLYWOOD-CHAMPION PAPERS
ABSTRACT : PROCESSES FOR ENCAPSULATING MINUTE OIL DROPLETS, THE
PRODUCTS PRODUCED THEREBY, AND THE UTILITY THEREOF IN
PRESSURE-RESPONSIVE, TRANSFER-COPY SYSTEMS.
KEYWORDS : MICROCAPSULE; MICROENCAPSULATE; ENCAPSULATE; DROPLET

Item 99

TITLE : PROCESS OF MAKING MICROCAPSULES
PATENT NUMBER : 3173878
PATENT COUNTRY : US
INVENTOR(S) : REYES Z
ASSIGNEE : INTERNATIONAL BUSINESS MACHINES
KEYWORDS : MICROCAPSULE; ENCAPSULATE; COATING

Item 100

2028671839

TITLE : ENCAPSULATION PROCESS AND ITS PRODUCT
PATENT NUMBER : 3155590
PATENT COUNTRY : US
INVENTOR(S) : MILLER R E; ANDERSON J L
ASSIGNEE : NATIONAL CASH REGISTER CO
ABSTRACT : CYCLIC PROCESS OF MANUFACTURING MINUTE CAPSULES IN LIQUID
MANUFACTURING VEHICLE SYSTEMS.
KEYWORDS : ENCAPSULATE; MICROCAPSULE

Item 101

TITLE : COACERVATION PROCESS FOR ENCAPSULATION OF LIPOPHILIC
MATERIALS
PATENT NUMBER : 3069370
PATENT COUNTRY : US
INVENTOR(S) : JENSEN E H; WAGNER J G
ASSIGNEE : UPJOHN CO
ABSTRACT : ENCAPSULATED, FINELY DIVIDED LIPOPHILIC MATERIAL.
KEYWORDS : ENCAPSULATE; LIQUID; POLYMER

Item 102

TITLE : ARTICLE CONTAINING MICROENCAPSULATED MATERIALS
PATENT NUMBER : 4654256
PATENT COUNTRY : US
INVENTOR(S) : DOREE R H; UGRO J V
ASSIGNEE : MINNESOTA MINING AND MANUFACTURING
ABSTRACT : RUPTURABLE MICROCAPSULES IN A BINDER ARE APPLIED BY HEAT
AND PRESSURE TO POROUS SUBSTRATE, OR CAN BE EMBEDDED
WITHOUT USE OF BINDER. USES DISCLOSED AS TEXTILES,
ADHESIVES FOR DECALS, ETC., FRAGRANCE OR FLAVOR RELEASE IN
GRAPHICS, DECORATIVE ARTICLES. POTENTIAL FOR PACKAGING.
KEYWORDS : PRINT; COAT; THERMOPLASTIC; APPLY; MICROCAPSULE;
MICROENCAPSULATE; FLAVOR RELEASE

Item 103

TITLE : PROCESS OF ENCAPSULATING AN OIL AND PRODUCT PRODUCED
THEREBY
PATENT NUMBER : 3971852
PATENT COUNTRY : US
INVENTOR(S) : BRENNER J; HENDERSON G H; BERGENSTEN R W
ASSIGNEE : POLAK'S FRUTAL WORKS INC
ABSTRACT : OUTER MATRIX POLYSACCHARIDE: GUM, STARCH DERIVATIVE,
HYDROLYZED STARCH.
KEYWORDS : ENCAPSULATE; HYDROLYZE; CARBOHYDRATE

Item 104

TITLE : IMPROVEMENTS IN CIGARETTES

2028671840

PATENT NUMBER : 1194572
PATENT COUNTRY : GB
INVENTOR(S) : GREEN S J
ASSIGNEE : BRITISH-AMERICAN TOBACCO
ABSTRACT : VOLATILE FLAVOR ADDITIVES APPLIED TO FILTER MATERIAL OR
TOW AS A SLURRY OF CAPSULES IN WATER. APPLIED BY SPRAYING,
COATING, ETC. EXAMPLE IS MENTHOL IN SPHERICAL GELATIN
MICRO CAPSULES.
KEYWORDS : FLAVOR RELEASE; ENCAPSULATE; RUPTURE; MANUAL; BREAKABLE

Item 105

TITLE : TOBACCO CONTAINING ENCAPSULATED FLAVOR
PATENT NUMBER : 1284151
PATENT COUNTRY : GB
INVENTOR(S) : QUINN A D
ASSIGNEE : INTERNATIONAL FLAVORS & FRAGRANCES
ABSTRACT : MULTIPLE SMALL FLAVOR CAPSULES IN FILLER, OPENED BY
BURNING COAL; MAKE NOISE.
KEYWORDS : ENCAPSULATE; CAPSULE; OPEN; HEAT

Item 106

TITLE : TOBACCO WRAPPER, TOBACCO PRODUCT EMBODYING SAME AND
METHOD FOR MAKING THE TOBACCO PRODUCT
PATENT NUMBER : 945142
PATENT COUNTRY : GB
INVENTOR(S) : NONE GIVEN
ASSIGNEE : R J REYNOLDS
ABSTRACT : CIGARETTE PAPER OR WRAPPER HAVING PORTION COATED WITH
ENCAPSULATED FLAVOR.
KEYWORDS : ENCAPSULATE; STRIPE; POLYSACCHARIDE; POLYPEPTIDE

Item 107

TITLE : CIGARETTES AND METHOD OF PROVIDING THEM WITH A FLAVORANT
PATENT NUMBER : 1349537
PATENT COUNTRY : GB
INVENTOR(S) : RASKINO L M A; FOLEY M G; PAYNE G S
ASSIGNEE : IMPERIAL GROUP
ABSTRACT : MENTHOL SOLUTION MICROENCAPSULATED IN GELATIN GUM.
KEYWORDS : FLAVOR; CIGARETTE; MICROENCAPSULATE; SMOKING PRODUCT;
ADDITIVE; ENCAPSULATE; FILLER

Item 108

TITLE : IMPROVEMENTS RELATING TO TOBACCO SMOKE FILTERS
PATENT NUMBER : 1257290
PATENT COUNTRY : GB
INVENTOR(S) : HORSEWELL H G; TOLMAN T W C
ASSIGNEE : BRITISH-AMERICAN TOBACCO
ABSTRACT : MULTIPLE FILTER WITH MANUALLY RUPTURABLE CAPSULE WITH
HUMIDIFIER (INNER) AND POORLY ABSORBENT (OUTER) SECTION.
THE TOW OF THE ABSORBENT MIDDLE SECTION MAY ALSO CONTAIN
POLYETHYLENE IMINE AND/OR ZINC ACETATE FILTER ADDITIVES.
THE ENCAPSULATING AGENT MAY BE WAX OR A RESIN OR POLYMER.
END SEAL MAY BE SCOTCH TAPE. END SECTIONS ARE CELLULOSE
ACETATE AND MIDDLE IS PAPER.
KEYWORDS : HUMIDIFY; ABSORB; WATER; ADDITIVE; CELLULOSE ACETATE;
COMPOSITE; MOISTURE RELEASE; SELECTIVE; HCN; HYDROGEN
SULPHITE; ENCAPSULATE

2028671841

TITLE : ADDITIVES FOR SMOKING TOBACCO PRODUCTS
 PATENT NUMBER : 3006347
 PATENT COUNTRY : US
 INVENTOR(S) : KEATON J L
 ASSIGNEE : R J REYNOLDS
 ABSTRACT : UNIFORM APPLICATION OF FLAVORS SUCH AS VOLATILE ESSENTIAL OILS OR OTHER FLAVOR TO CIGARETTE WRAPPERS, USING AS ENCAPSULATING FILM A POLYSACCHARIDE, POLYPEPTIDE OR MIXTURE. PREFERABLY LESS THAN 25 PERCENT OF THE PAPER IS COATED IN AN INTERMITTENT PATTERN. MAY ALSO BE APPLIED ONLY ON THE SEAM OR AS THE ADHESIVE SO AS NOT TO BE VISIBLE. MINIMIZES FLAVOR LOSS IN STORAGE OR ROD MAKING.
 KEYWORDS : ADDITIVE; ENCAPSULATE; FLAVOR; WRAPPER; STARCH; FILM; PAPER; SMOKING PRODUCT; STORAGE STABLE; PASTE; FLAVOR LOSS

Item 112

TITLE : POWDERED INSTANT BEVERAGE MIX
 PATENT NUMBER : 3023106
 PATENT COUNTRY : US
 INVENTOR(S) : COMMON J L
 ASSIGNEE : GENERAL FOODS CORPORATION
 ABSTRACT : INSTANT BEVERAGE MIX WITH GUM-ENCAPSULATED FAT.
 KEYWORDS : ENCAPSULATE; POWDER; MIXTURE

Item 113

TITLE : CIGARETTE FILTER
 PATENT NUMBER : 1692936
 PATENT COUNTRY : DE
 INVENTOR(S) : NONE GIVEN
 ASSIGNEE : NATIONAL CASH REGISTER CO
 ABSTRACT : SMALL CAPSULES TEMPORARILY SEALING IN A FLUID AROMATIC MATERIAL WHICH IS RELEASED BY PRESSURE.
 KEYWORDS : CAPSULE; AROMA; FLAVOR RELEASE; RELEASE; FLAVOR; ENCAPSULATE; SQUEEZE

Item 114

TITLE : IMITATION CIGARETTE
 PATENT NUMBER : 3347231
 PATENT COUNTRY : US
 INVENTOR(S) : CHANG C
 ASSIGNEE : NONE GIVEN
 ABSTRACT : SUBSTITUTE CIGARETTE OR AEROSOL INHALANT DEVICE CONTAINING A FRANGIBLE CAPSULE OF LIQUID FLAVOR OR MEDICAMENT. VARIOUS INTERNAL MEANS ARE PROVIDED FOR BREAKING THE CAPSULE, E.G., PULLING A STRING OR MOVING A DISC TO PUNCTURE. THE TYPES OF VOLATILE MATERIALS ARE NOT DISCLOSED. THE SIMULATED CIGARETTE TUBE IS SAID TO BE MADE OF INTRICATELY FOLDED PAPER BUT SIGNIFICANCE NOT CLEAR. THE FLAVOR CHAMBER IS SHOWN IN SEVERAL POSITIONS ALONG THE LENGTH, ALSO A DUAL FLAVOR ELEMENT, AND THE TUBE APPEARS TO HAVE A CENTRAL PASSAGE OR CHANNEL. ONE VERSION HAS

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TOBACCO FILLER AS IN A CONVENTIONAL ROD BUT IS
NONCOMBUSTING.

KEYWORDS : SMOKELESS; ENCAPSULATE; FLAVOR RELEASE; SUBSTITUTE
CIGARETTE; INHALANT DEVICE; BREAK; FLAVOR CHAMBER

Item 115

TITLE : CIGARETTE AND SMOKE FILTER AND FLAVOR
PATENT NUMBER : 3339557
PATENT COUNTRY : US
INVENTOR(S) : KARALUS L W
ASSIGNEE : NONE GIVEN
ABSTRACT : CIGARETTE HAS A SEALED FLAVOR CHAMBER IN THE FILTER WHICH
IS MANUALLY BROKEN OR ACTUATED ON REMOVAL OF THE CIGARETTE
FROM THE PACK. THE FILTER CONTAINS MOLDED, COMPRESSED OR
COMPACTED CHARCOAL GRANULES HAVING RANDOM PASSAGES. A
BINDER SUCH AS PECTIN MAY BE ADDED. IT MAY ALSO BE FORMED
BY PYROLYZING A COMPRESSED QUANTITY OF CARBON FIBERS INTO
A PELLET. IN THE FILTER COMPONENT THE PELLET OR CHARCOAL
CHARGE IS PLACED IN A JACKET BETWEEN TWO SEALING ELEMENTS
OF FRANGIBLE, MOISTURE CONTAINING CAPSULES WHICH ARE
SECURED AT POINTS AND PROVIDED WITH TEAR TAPES OR STRINGS
FOR PULLING THESE OUT. THUS THE ENDS OF THE CHARCOAL MASS
CAN BE MOISTENED. THE CHAMBERS IN WHICH THE RUPTURABLE
CAPSULES ARE PLACED ARE COATED OR LINED WITH PECTIN. THE
FILTER WRAP SHOULD BE MOISTUREPROOF. THE FILTER PLUG MAY
BE CELLULOSIC AND MAY ALSO CONTAIN CHARCOAL. ONE VERSION
SHOWS A SMALL CENTRAL PASSAGE OR BORE FROM THE MOUTH END
LEADING TO A HOLLOW SPACE AND A CUP-SHAPED DEFLECTOR FOR
SMOKE FLOW TO CREATE A VENTURI EFFECT.

KEYWORDS : FLAVOR CHAMBER; ENCAPSULATE; DENSIFY; FLAVOR CARRIER;
FLAVOR RELEASE; TEAR TAPE; BREAK; RUPTURE

Item 110

TITLE : METHOD OF COOLING CIGARETTE SMOKE
PATENT NUMBER : 3547130
PATENT COUNTRY : US
INVENTOR(S) : HARLOW E S; FLINT J R
ASSIGNEE : AMERICAN TOBACCO
ABSTRACT : RUPTURABLE CAPSULES OF ETHANOL AND OR WATER IN FILTER.
FILTER IS MANUALLY SQUEEZED TO RELEASE LIQUID WHICH
VAPORIZES. FILTER MATERIAL MAY BE FIBER, PAPER, OR
GRANULAR FILLER.
KEYWORDS : RUPTURE; CAPSULE; SQUEEZE; VAPORIZE; VOLATILE; ALCOHOL;
HYDROCARBON; MICA; ENCAPSULATE; MICROCAPSULE; BREAK

Item 117

2028671843

TITLE : SMOKING ARTICLES HAVING ENCAPSULATED TOBACCO ADDITIVES
AND THEIR MANUFACTURE
PATENT NUMBER : 3162199
PATENT COUNTRY : US
INVENTOR(S) : MOLL C J
ASSIGNEE : BROWN & WILLIAMSON
ABSTRACT : THE CIGARETTE CONTAINS A SMALL TUBE OR RIBBON-LIKE
CAPSULE HOLDING FLAVORANT MATERIAL FOR RELEASE AS THE
CIGARETTE IS SMOKED. THE CAPSULE IS PREFERABLY AN EXTRUDED
TUBE INTO WHICH THE FLAVORANT IS PLACED OR IS MADE BY
FOLDING A RIBBON OR BAND OVER THE ADDITIVE FOR INSERTION
INTO THE CIGARETTE. A PROCESS IS DESCRIBED FOR MAKING THE
ROD AND INCORPORATING THE ENCAPSULATED FLAVOR TUBE IN THE
TOBACCO FILLER JUST INSIDE THE WRAPPER. THE TUBULAR
MATERIAL CAN BE THERMOPLASTIC AND THE FLAVORANT IN POWDER
FORM. THE RIBBON OR TUBE MAY BE PINCHED OR SEALED AT
INTERVALS ALONG THE LENGTH TO FORM SEGMENTS OR CHAMBERS
FOR GRADUAL FLAVOR RELEASE. POLYETHYLENE, CELLULOSIC
MATERIALS OR GUMS CAN BE USED AS ENCAPSULATING MATERIALS
AND VARIOUS FLAVORS ARE DISCLOSED, INCLUDING MENTHOL AND
DIFFERENT TOBACCO FLAVORS OR BLENDS.
KEYWORDS : FLAVOR CORE; FLAVOR RELEASE; PROGRAMMED; ROD MAKING;
THERMAL; DUAL FILLER; INSERT; AXIAL

Item 118

TITLE : ON PAGE FRAGRANCE SAMPLING DEVICE
PATENT NUMBER : 4606956
PATENT COUNTRY : US
INVENTOR(S) : CHARBONNEAU J W; RELYEA K E
ASSIGNEE : MINNESOTA MINING AND MANUFACTURING
ABSTRACT : MICROENCAPSULATED MATERIALS ARE RELEASED BY RUPTURING OF
AN ADHESIVE LAYER ON A SUBSTRATE CONTAINING THE CAPSULES.
AT LEAST TWO SHEETS ARE SECURED BY THE ADHESIVE LAYER
CONTAINING THE MICROCAPSULES. AT LEAST ONE OF SAID TWO
SHEETS HAS AN ADHESIVE ON THE OUTER FACE OF SAID AT LEAST
ONE SHEET.
KEYWORDS : MULTILAYER; AROMA; COATED; PULL APART; LAMINATE; LABEL;
FLAVOR RELEASE; TEAR STRIP; TEAR TAPE; BINDER; VISUAL
IMAGE; ODOR; MICROENCAPSULATE; RUPTURE

Item 119

TITLE : PROCESS FOR PREPARING A SOLID FLAVORING COMPOSITION
PATENT NUMBER : 2904440
PATENT COUNTRY : US
INVENTOR(S) : DIMICK K P; MAKOWER B
ASSIGNEE : USA
KEYWORDS : FLAVOR; SOLVENT; EXTRACT; SORBITOL; ENCAPSULATE; FRUIT

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Item 120

TITLE : STABLE CINNAMON-FLAVORED CHEWING GUM COMPOSITION
PATENT NUMBER : 4722845
PATENT COUNTRY : US
INVENTOR(S) : CHERUKURI S R; MANSUKHANI G; JACOB K C
ASSIGNEE : WARNER-LAMBERT
ABSTRACT : CONTROLLED RELEASE SWEETENER FOR CHEWING TOBACCO.
COMPRISES A GUM BASE, CINNAMON FLAVOR AND A SWEETENER
DELIVERY SYSTEM BASED ON A DIPEPTIDE OR AMINO ACID
SWEETENER, E.G. ASPARTAME OR SACCHARINE, ENCAPSULATED IN A
MIXTURE OF FAT AND HIGH MELTING-POINT (106 DEGREES)
POLYETHYLENE WAX. THE PROCESS PROVIDES AN IMPROVED
PROTECTIVE COATING FOR CORE MATERIALS PREVENTING CHEMICAL
REACTIONS BETWEEN FOR EXAMPLE LECITHIN, CINNAMON AND
ASPARTAME. THE SPRAY CONGEALING AND AGGLOMERATION OF
PARTICLES CHANGES THE NEEDLE LIKE ASPARTAME CRYSTALS INTO
A ROUNDED MATRIX AGGREGATE.
KEYWORDS : DELAYED RELEASE; SLOW RELEASE; CARRIER; SUSTAINED; FLAVOR
RELEASE; HYDROPHOBIC; SPHERICAL

Item 121

TITLE : MANUFACTURE OF HOLLOW FINE TUBULAR DRUG DELIVERY SYSTEMS
PATENT NUMBER : 4720384
PATENT COUNTRY : US
INVENTOR(S) : DI LUCCIO R C; DUGGINS R B; SHEFTER E
ASSIGNEE : E I DUPONT
ABSTRACT : CONTROLLED RELEASE ENCAPSULATED PHARMACEUTICALS
COMPRISING SEALED SHEATH AND CASE POLYMERIC TUBE.
KEYWORDS : DELAY; DELAYED RELEASE; SLOW; SLOW RELEASE; SUSTAINED;
OSMOSIS; MEMBRANE; MIGRATE; DOSE; POLYOLEFIN; POROUS;
POROSITY; ENCAPSULATE

Item 122

TITLE : PROCESS FOR ENCAPSULATING SUBSTANCES BY MEANS OF
MICROORGANISMS AND THE ENCAPSULATED PRODUCTS OBTAINED
THEREBY
PATENT NUMBER : 0085805
PATENT COUNTRY : EP
INVENTOR(S) : GERMAN R J; MORRIS G G; PANNELL N A
ASSIGNEE : DUNLOP CO
ABSTRACT : UTILIZES A GROWN MICROBE, ONE HARVESTED FROM A CULTURE,
CONTACTED WITH AN ORGANIC LIPID-EXTENDING SUBSTANCE, I.E.,
AN ORGANIC LIQUID SOLVENT FOR THE LIPID CAPABLE OF BEING
ABSORBED BY THE MICROORGANISM AND RETAINED PASSIVELY. THE
TREATED MICROBE IS THEN SIMULTANEOUSLY SUBSEQUENTLY
CONTACTED WITH THE MATERIAL TO BE ENCAPSULATED. YEAST OR A

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FUNGUS IS PREFERRED, AND THE MICROBE SHOULD HAVE A LARGE CELL SIZE. THE LIPID IS TAKEN IN BY DIFFUSION. THE METHOD PARTICULARLY SUITED FOR DYES, E.G., LEUCO DYES, BUT ALSO CAN BE USED FOR FLAVORS, PHARMACEUTICALS, BINDERS, ADHESIVES, INSECTICIDES OR OTHER DELAYED RELEASE MATERIALS. MAY BE ADHERED TO A SUBSTRATE SUCH AS COATING ON PAPER.

KEYWORDS : FIX; LIPOMYCES; CANDIDA; TRICHOSPORON; CLOVE OIL; ESSENTIAL OIL; OSMOSIS; METHANOL; ALCOHOL; INK; ADHESIVE; COLOR RELEASE; FLAVOR RELEASE; PRINT; PRESSURE; RUPTURE

Item 123

TITLE : STABLE POWDERED PERFUME COMPOSITION, ESPECIALLY FOR TOBACCO PRODUCTS
PATENT NUMBER : 53-104743
PATENT COUNTRY : JP
INVENTOR(S) : NONE GIVEN
ASSIGNEE : JAPAN TOBACCO & SALT PUBLIC CORP
ABSTRACT : PREPARED BY ADDING POLYSACCHARIDE TO MIXED SUGAR SOLUTION, HEATING TO FORM SUGAR POLYMER; ADDING PERFUME AND DRYING.
KEYWORDS : SUCROSE; HEAT; MIX; ENCAPSULATE; COPOLYMERIZE; CARBOHYDRATE; STORAGE; COAGULATE; GRANULE; ADDITIVE; PROTECT; DRY

Item 125

TITLE : ARTICLES AND METHOD
PATENT NUMBER : 3599859
PATENT COUNTRY : US
INVENTOR(S) : MAIERSON T
ASSIGNEE : NATIONAL CASH REGISTER CO

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ABSTRACT : PACKAGE OR BOX OPENING FLAP HAVING AT LEAST ONE FLEXIBLE
TEAR STRING CONTAINING PRESSURE-RUPTURABLE CAPSULES FOR
FLAVOR RELEASE BETWEEN THE PACK WALL OR LID AND THE TEAR
STRIP. CLAIMS TO CONTAINER OR PACKAGE. THE TAPE CAN BE A
PLURALITY OF PARALLEL MONOFILAMENTS. DISCLOSES USING IN
CONJUNCTION WITH DELAYED RELEASE CAPSULES.

KEYWORDS : FLAVOR RELEASE; TEAR TAPE; LAYER; ENCAPSULATE; LAMINATE;
CLOSURE; CARDBOARD; TEAR STRIP; SPHERICAL CELL;
MICROENCAPSULATE; VOLATILE; ESSENTIAL OIL

Item 126

TITLE : MICROBIAL ENCAPSULATION
PATENT NUMBER : 0242135
PATENT COUNTRY : EP
INVENTOR(S) : PANNELL N A
ASSIGNEE : AD2 LTD
ABSTRACT : ABSORPTION OF FLAVORS SUCH AS ESSENTIAL OILS OR VOLATILES
BY DIFFUSION INTO A CULTURED, GROWN MICROBE CELL WALL,
WITHOUT THE NEED FOR A HIGH MICROBIAL LIPID CONTENT OR A
LIPID-EXTENDING SOLVENT MATERIAL OR PLASMOLYSER. THE
ENCAPSULATABLE MATERIAL SHOULD BE A LIQUID OR IN A SOLVENT
SUCH AS A LOWER ALCOHOL, WHICH CAN BE REMOVED BY DRYING.
THE MICROBE IS PREFERABLY A FUNGUS SUCH AS YEAST, AND OF
LARGE CELL SIZE. ALSO USEFUL FOR ENCAPSULATING OTHER
MATERIALS. THE MICROBE MAY BE PRETREATED OR CONCURRENTLY
TREATED TO ENHANCE PERMEABILITY.

KEYWORDS : BACTERIA; ALGAE; MENTHOL; STABLE; MICROENCAPSULATE;
EMULSION; GLOBULE; FLAVOR RELEASE; CARRIER; FIX; OSMOSIS;
RUPTURE

Item 127

TITLE : THERMAL INDICATORS FOR SMOKING ARTICLES
PATENT COUNTRY : US
INVENTOR(S) : SPRINKEL F M; MORGAN C H; LOSEE D B
ASSIGNEE : PHILIP MORRIS
ABSTRACT : THERMAL INDICATORS FOR NON-COMBUSTION SMOKING ARTICLES
WHICH PHYSICALLY CHANGE WHEN HEATED TO PROVIDE VISUAL
INDICATIONS OF TEMPERATURE CHANGES. THE INDICATORS
COMPRISE WAXES OR OTHER COMPOUNDS WHICH MELT AWAY TO
REVEAL COLORED SUBSTRATES, OR COMPRISE MICROENCAPSULATED
CHEMICALS WHICH ARE RELEASED WHEN HEATED TO CAUSE INKING
OR DYEING. THE THERMAL INDICATORS ARE PRINTED IN A VARIETY
OF PATTERNS ALONG THE LENGTH OF THE SMOKING ARTICLES TO
SHOW TEMPERATURE CHANGES AND TO INDICATE WHETHER THE
SMOKING ARTICLE IS FINISHED AND SHOULD BE DISCARDED.

KEYWORDS : BETA; INK JET; INDICATOR; WAX; RELEASE; PATTERN; STERIC
ACID; DOT; MARKING; INK; DETECT; MELT; MONITOR; COLOR
CHANGE; GUM ARABIC; PRINT; PRINT WHEEL; CARBON; THERMALLY

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RESPONSIVE; HEAT-SENSITIVE; HYDROCARBON; HARDEN; POLYVINYL
ACETATE; PECTIN; FATTY ACID ESTER; APPLY; HEAT RELEASE;
MICROENCAPSULATE; ENCAPSULATE

PM NUMBER/DATE

: PM1332

Item 128

TITLE : PAPER PRODUCT FOR STORING FRAGRANCES
PATENT NUMBER : 4746567
PATENT COUNTRY : US
INVENTOR(S) : ZELTER J E
ASSIGNEE : YLANG
ABSTRACT : COMPRISES A PAPER SUPPORT IN WHICH THERE IS EMBEDDED A
QUANTITY OF MICROCAPSULES IN SOME OF WHICH THERE IS
ENCAPSULATED A FRAGRANT ESSENCE WHILE OTHERS ARE WITHOUT
FRAGRANCE, E.G., FILLED WITH A NEUTRAL FLUID. THE
MICROCAPSULES ARE INCORPORATED IN THE PAPER DURING ITS
PREPARATION FROM PASTE. THE NEUTRAL CAPSULES ARE LAYERED
TO PROTECT THE FRAGILE FLAVOR RELEASE CAPSULES DURING
HANDLING. RUPTURED BY MANUAL PRESSURE, I.E., RUBBING OR
CRUSHING. GELATINE ENCAPSULATION AGENT.

KEYWORDS

: LAMINATE; AROMA; SHEET; MICROENCAPSULATE; ENCAPSULATE;
MICROCAPSULE; FLAVOR RELEASE

Item 129

TITLE : ELASTOMER ENCASED ACTIVE INGREDIENTS
PATENT NUMBER : 0288909
PATENT COUNTRY : EP
INVENTOR(S) : KEHOE G S
ASSIGNEE : NABISCO INC
ABSTRACT : SLOW FLAVOR RELEASE ENCAPSULATED ADDITIVE FOR CHEWING GUM,
CHEWING TOBACCO AND SUCH. THE RELEASE RATE CAN BE
PRESELECTED BY VARYING THE HARDNESS OR SOFTNESS OF THE
COATING, THE AMOUNT OF PLASTICIZER, FILLER, ETC. IN THE
HIGH SHEAR MIXTURE. DISCLOSES ADDITIVES WHICH ARE REACTIVE
AFTER RELEASE BY MASTICATION AND MOISTURE, SUCH AS CALCIUM
CARBONATE AND CITRIC ACID TO RELEASE CARBON DIOXIDE.

KEYWORDS

: EFFERVESCENT; DELAYED; DELAYED RELEASE; SWEETENER; EXTEND;
COLOR; SUSTAINED; SLOW RELEASE; ENCAPSULATE; CHEWING GUM

Item 130

TITLE : PACKAGING APPARATUS METHOD AND PRODUCT
PATENT NUMBER : 3785556
PATENT COUNTRY : US
INVENTOR(S) : WATKINS L D
ASSIGNEE : NONE GIVEN
ABSTRACT : DIRECTED TO IMPROVED MEANS AND METHOD FOR ENCAPSULATING
LIQUIDS WITHIN A HEAT-SEALED PLASTIC PACKAGE TO PRODUCE AN

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Item 133

TITLE : PACKAGE OPENING SYSTEM
 PATENT NUMBER : 4720423
 PATENT COUNTRY : US
 INVENTOR(S) : FRASER A D
 ASSIGNEE : MINNESOTA MINING AND MANUFACTURING
 ABSTRACT : A MULTILAYER STRIP HAVING AN ADHESIVE BETWEEN LAYERS, THE ADHESIVE CONTAINING FRANGIBLE MICROCAPSULES CARRYING A IMPROVED PRODUCT, PARTICULARLY USEFUL IN DISSEMINATING VAPORIZABLE LIQUIDS. PROCESS FOR ENCASING VOLATILES BETWEEN SHEETS OF PLASTIC FILM FOR AROMA RELEASE OR SUSTAINED RELEASE OF DEODORANTS, INSECTICIDES AND SUCH. CONTROLLED THROUGH PERMEABILITY OF FILM, E.G., POLYOLEFIN.
 KEYWORDS : PAD; FLAVOR RELEASE; SLOW RELEASE; VAPORIZE; DIFFUSE; TUBULAR; PACKET; HEAT SEAL

Item 131

TITLE : IMPREGNATED POROUS GRANULES WITH SLOW RELEASE PORE MEMBRANES AND PROCESS THEREFOR
 PATENT NUMBER : 4223070
 PATENT COUNTRY : US
 INVENTOR(S) : HAHN A U; RIDER R H; SCHER H B; HARGROVE G L
 ASSIGNEE : STAUFFER CHEMICAL CO
 ABSTRACT : OPEN-ENDED PORES OF A POROUS GRANULE ARE FILLED WITH A LIQUID MATERIAL WHICH IS AT LEAST PARTIALLY IMMISCIBLE WITH WATER, AND SEALED WITH A POROUS POLYUREA MEMBRANE WHICH LIMITS THE RELEASE RATE OF THE MATERIAL INTO THE SURROUNDING MEDIUM. THE COATING ALLOWS CONTROLLED, SUSTAINED RELEASE OF FLAVOR, PHARMACEUTICALS, ETC. AND MAY BE WATER-INSOLUBLE OR DISSOLVABLE. IMPROVED ENCAPSULATION SINGLE COATING PROCESS INVOLVES CATALYST AND ORGANIC POLYISOCYANATE.
 KEYWORDS : POLYMERIC; FLAVOR RELEASE; INSECTICIDE; PARTICULATE FRAGRANT LIQUID THEREIN, CAN BE USED AS A TEAR STRIP FOR A PACKAGE OVERWRAP. UPON PULLING THE OUTWARD LAYER OF SAID STRIP, THE OVERWRAP IS OPENED AND THE FRAGRANCE IS RELEASED. FOR CIGARETTE AND FOOD PACKAGES.
 KEYWORDS : FRESHNESS; AROMA; FLAVOR RELEASE; TEAR TAPE; MICROENCAPSULATE; MENTHOL; PVA; FLIP-TOP; SHEET; FILM; MENTHOL; TEAR STRIP; MICROCAPSULE; TAB; LAMINATE; ENCAPSULATE; RUPTURE; PULL APART; ODOR; THERMAL; PRESSURE SENSITIVE; BINDER; COATED

Item 134

TITLE : METHOD FOR DELIVERING AN ACTIVE INGREDIENT BY CONTROLLED TIME RELEASE UTILIZING A NOVEL DELIVERY VEHICLE WHICH CAN BE PREPARED BY A PROCESS UTILIZING THE ACTIVE INGREDIENT AS A POROGEN
 PATENT NUMBER : 4690825
 PATENT COUNTRY : US
 INVENTOR(S) : WON R
 ASSIGNEE : ADVANCED POLYMER SYSTEMS
 ABSTRACT : POROUS POLYMER BEADS AS CARRIERS FOR CONTROLLED RELEASE OF FRAGRANCES, PHARMACEUTICALS, ETC. NON-COLLAPSIBLE WITH HIGH MECHANICAL STRENGTH OVER MICROENCAPSULATED FORMS. COPOLYMER IS STYRENE AND DIVINYLBENZENE. THE BEADS MAY BE DRIED TO A POWDER. MINERAL OIL USED AS A POROGEN.
 KEYWORDS : REINFORCED; DELAYED; STABLE; MOISTURE RESISTANCE; NON-TOXIC; SPONGE-LIKE; MATRIX; SPHERICAL; FLAVOR RELEASE; VOLATILES

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Item 136

TITLE : SMOKING ARTICLE WITH AN ENCLOSED HEAT CONDUCTIVE CAPSULE
CONTAINING AN AEROSOL FORMING SUBSTANCE
PATENT NUMBER : 0305788
PATENT COUNTRY : EP
INVENTOR(S) : CLEARMAN J F; CASEY W J; PURIN O P; STEWART G M
ASSIGNEE : R J REYNOLDS
ABSTRACT : WHEN THE SMOKING ARTICLE, WHICH CONTAINS A COMBUSTIBLE
FUEL ELEMENT, IS LIT, THE AEROSOL FORMING MATERIAL IN A
HEAT CONDUCTIVE CAPSULE EXPANDS RAPIDLY AND IS RELEASED BY,
FOR EXAMPLE, THE RUPTURE OF THE CAPSULE. PREFERABLY, A
SORBENT PROVIDED ADJACENT TO THE CAPSULE, TEMPORARILY
RETAINS THE AEROSOL FORMER, TO PROVIDE A MORE UNIFORM
AEROSOL DELIVERY. ENCAPSULATION OF THE AEROSOL-FORMING
SUBSTANCE REDUCES, OR ELIMINATES ITS MIGRATION TO OTHER
PARTS, E.G. THE FUEL ELEMENT, BY REDUCING OR ELIMINATING
MOISTURE PICK-UP, WHICH REDUCES THE HEAT REQUIRED TO
PRODUCE AN AEROSOL, AND RESULTS IN A COOLER AEROSOL
DELIVERY. LESS CARBON MONOXIDE IS PRODUCED AND LESS
DECOMPOSITION OF THE AEROSOL-FORMING MATERIALS OCCUR. THE
CAPSULE IS MADE FROM ALUMINUM FOIL OR THIN METAL, CRIMPED
TO SEAL ENDS. FLAVORS ARE INCLUDED IN OR ADJACENT TO THE
AEROSOL GENERATOR CAPSULE. THE BLOTTING AGENT MAY BE PAPER
OR TOBACCO, E.G., RECONSTITUTED SHEET OR OTHER MATERIALS,
PARTICULATES OR PELLET MIXTURES.
KEYWORDS : SMOKELESS CIGARETTE; PREMIER; FLAVOR RELEASE; NICOTINE
RELEASE

Item 137

TITLE : AN AROMATIC COMPOSITION AND A METHOD FOR THE PRODUCTION
OF THE SAME
PATENT NUMBER : 0281034
PATENT COUNTRY : EP
INVENTOR(S) : YAMAMOTO T
ASSIGNEE : NONE GIVEN
ABSTRACT : CONTINUOUS FLAVOR RELEASE OF ENCAPSULATED OR CLATHRATED
VOLATILES FROM A POROUS MATRIX OF CONJUGATED POLYMER
PREPARED FROM METAL ALKOXIDES AND SILANE COUPLING AGENTS.
DISCLOSES WIDE GROUP OF METAL OXIDES AND SILANE COMPOUNDS
WITH VINYL MONOMERS.
KEYWORDS : SOL GEL; CARRIER; FLAVOR RELEASE; SLOW RELEASE; PERFUME;
HYDROLYSIS; CROSS LINK

Item 138

TITLE : CHEWING GUM CONTAINING FLAVOR COMPOSITION AND FLAVOR
COMPOSITION THEREFOR

2028671850

PATENT NUMBER : 4259355
PATENT COUNTRY : US
INVENTOR(S) : MARMO D; ROCCO F L
ASSIGNEE : INTERNATIONAL FLAVORS & FRAGRANCES
ABSTRACT : CONCERNS ORALLY UTILIZABLE COMPOSITIONS CONTAINING A
NON-CONFINED FLAVOR OIL, A FLAVOR OIL ENTRAPPED IN SOLID
PARTICLES AND A SUSPENDING AGENT SUCH AS HYDROXYPROPYL
CELLULOSE. IS ADDED TO CHEWING GUM AND ALSO CHEWING
TOBACCO.
KEYWORDS : CONCENTRATE; DRY; HYDROXYALKYL CELLULOSE; MENTHOL;
ADDITIVE; DELAY; POWDER; ENCAPSULATE; ESSENTIAL OIL;
SUSPENSION; RELEASE

Item 139

TITLE : NOVEL SWEETENER DELIVERY SYSTEMS
PATENT NUMBER : 4752485
PATENT COUNTRY : US
INVENTOR(S) : SHARMA S C; YANG R K; SHAW J J
ASSIGNEE : WARNER-LAMBERT
ABSTRACT : DIRECTED TOWARDS PROVIDING A CONTROLLED RELEASE SWEETENER
SUCH AS ASPARTAME AND SACCHARIN FOR DRUGS, MEDICAMENTS AND
FLAVORING AGENTS. THE CORE MATERIAL COMPRISES AT LEAST ONE
NATURAL OR ARTIFICIAL CORE MATERIAL SELECTED FROM AMINO
ACID BASED SWEETENERS, DIPEPTIDE SWEETENERS, GLYCYRRHIZIN,
SACCHARIN, ACESULPHAME, CYCLAMATES, STEVIOSIDES, TALIN,
DIHYDROCHALCONE COMPOUNDS ETC. AND A HYDROPHOBIC MATRIX
COMPRISING (A) LECITHIN, (B) AN EDIBLE MATERIAL SELECTED
FROM FATTY ACID OF IODINE VALUE 1-10, NATURAL WAXES,
SYNTHETIC WAXES AND THEIR MIXTURES, (C) A GLYCERIDE.
USEFUL IN CHEWING GUM, TOBACCO, ETC.
KEYWORDS : COATING; THICKNESS; SLOW RELEASE; FLAVOR RELEASE; OIL;
ENCAPSULATE; SPHERICAL; PARTICLE; FREE-FLOWING

Item 140

TITLE : STARCH BASED PARTICULATE ENCAPSULATION PROCESS
PATENT NUMBER : 4755397
PATENT COUNTRY : US
INVENTOR(S) : EDEN J; TRKSAC R; WILLIAMS R
ASSIGNEE : NATIONAL STARCH AND CHEMICAL CORP
ABSTRACT : ELIMINATES OR REDUCES LOSS OF VOLATILE MATERIALS. STARCH
AND CORE MATERIAL ARE SLURRIED WITH A SATURATED AQUEOUS
SOLUTION OF A SALT, THEN DISPERSED AND INTER-MIXED BY
STEAM AND PRESSURE. THE PRESSURE IS RAPIDLY REDUCED AND
THE MIXTURE QUICKLY COOLED, CAUSING THE STARCH POLYMER
CHAINS TO COLLAPSE UPON THEMSELVES, FORMING A MATRIX. THE
STARCH IS A HIGHLY RETROGRADED AND WATER RESISTANT
COATING. THE SALT MAY BE WASHED OUT.
KEYWORDS : DRYING; FLAVOR; MAGNESIUM SULFATE; CARRIER; ENCAPSULATE

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Item 141

TITLE : CIGARETTE OR CIGAR WITH FILTER AND AUTOMATIC EXTINGUISHER
PATENT NUMBER : 2242661
PATENT COUNTRY : DE
INVENTOR(S) : THIELE H; HARSdorFF M
ASSIGNEE : TABAK-ENGINEERING GMBH
ABSTRACT : AMPULE OF LIQUID EMBEDDED NEXT TO FILTER.
KEYWORDS : ENCAPSULATE; SELF-EXTINGUISH; SAFETY

Item 142

TITLE : FLAVOR AND SWEETNESS ENHANCEMENT DELIVERY SYSTEMS AND
METHOD OF PREPARATION
PATENT NUMBER : 4803082
PATENT COUNTRY : US
INVENTOR(S) : CHERUKURI S R; FAUST S M; ORLANDI D A
ASSIGNEE : WARNER-LAMBERT
ABSTRACT : COMPRISING A POWDERED FLAVOR COMPOSITION ENCAPSULATED IN
A MATRIX COMPRISING THAUMATIN, MONELLIN, DIHYDROCHALCONES
AND MIXTURES AND A HYDROPHOBIC WAX OR FAT. PARTICULARLY
USEFUL IN CHEWING GUMS, CONFECTIONERIES AND PHARMACEUTICAL
PREPARATIONS AS WELL AS OTHER FOOD PRODUCTS.
KEYWORDS : CARRIER; SWEETENER; DELAYED RELEASE; FLAVOR RELEASE

Item 143

TITLE : METHOD OF ENCAPSULATING-ENTRAPPING TOBACCO FLAVORS
DIRECTLY INTO CIGARETTE FILLER
INVENTOR(S) : KERITSIS G D
ASSIGNEE : PHILIP MORRIS
ABSTRACT : STABILIZES FLAVORANTS IN CIGARETTES AND PREVENTS LOSSES
DURING STORAGE OR PREVENTS CHANGES DUE TO OXIDATION OR DUE
TO OTHER REACTIONS.
KEYWORDS : STORAGE STABLE; ENCAPSULATE; ENTRAP; FLAVOR
PM NUMBER/DATE : PMD550

Item 144

TITLE : TAMPER INDICATOR TAPE
PATENT NUMBER : 3896965
PATENT COUNTRY : US
INVENTOR(S) : CORNELL L W
ASSIGNEE : MINNESOTA MINING AND MANUFACTURING
ABSTRACT : AN EASY OPENING, HERMETICALLY SEALED CONTAINER WITH A
PREFORMED APERTURE IS COVERED BY A TAPE CLOSURE HAVING ON
ITS OUTER SURFACE AN INDICATOR LAYER WHICH CHANGES COLOR
WHEN FLEXED, THEREBY INDICATING WHETHER THE CLOSURE HAS
BEEN HANDLED OR TAMPERED WITH. FOR USE ON CANS OF JUICE,

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ETC., HAVING PRESSURE SENSITIVE TEAR STRIP CLOSURES WHICH ARE COATED WITH ADHESIVE AND ENCAPSULATED DYE.

KEYWORDS : TEAR TAPE; TEAR STRIP; PACKAGE; COLOR CHANGE; INDICATOR; VISIBLE; TAMPER EVIDENT; TAMPERPROOF; OPEN; RUPTURE; PULL-TOP; PRESSURE SENSITIVE; ENCAPSULATE; SEAL; POLYMER FILM; PET

Item 145

TITLE : TAMPER INDICATOR TAPE
PATENT NUMBER : 3935960
PATENT COUNTRY : US
INVENTOR(S) : CORNELL L W
ASSIGNEE : MINNESOTA MINING AND MANUFACTURING
ABSTRACT : LAMINATE TEAR TAPE OR PRESSURE SENSITIVE CLOSURE HAVING AN OUTER INDICATOR LAYER WHICH UNDERGOES COLOR CHANGE WHEN FLEXED OR RUPTURED, THUS SERVING AS A VISIBLE INDICATOR OF TAMPERING. FOR USE ON CANS, PACKAGES AND OTHER CONTAINERS.

KEYWORDS : ENCAPSULATE; DYE; SEAL; TAMPER EVIDENT; TAMPERPROOF; OPEN; POLYMER FILM; PET; TEAR TAPE; PRESSURE SENSITIVE; COLOR CHANGE

Item 146

TITLE : CHECK PAPER THAT IS PROTECTED AGAINST FORGERY AND TAMPERING
PATENT NUMBER : 4496961
PATENT COUNTRY : US
INVENTOR(S) : DEVRIENT L
ASSIGNEE : GAO GESELLSCHAFT FUR AUTOMATION
ABSTRACT : RUPTURABLE MICROCAPSULES ARE EMBEDDED IN THE PAPER AND CONTAIN A LEVCO INK AND A COLOR ACCEPTOR.

KEYWORDS : COLOR CHANGE; COATING; VISIBLE; INDICATOR; TAMPER EVIDENT; SECURITY; TAMPERPROOF; PRINT; MULTICOLOR; ENCAPSULATE

Item 147

TITLE : DEVICE WHICH DELIVERS A FLAVORANT VAPOR BY PUFFING
INVENTOR(S) : SOUTHWICK E W
ASSIGNEE : PHILIP MORRIS
ABSTRACT : DEVICE WHICH CAN DELIVER A FLAVORANT VAPOR BY PUFFING. THE DESIGN PERMITS THE CONSUMER TO CONTROL THE TIME OF DELIVERY OF EACH PUFF. WHEN COMPLETELY USED, THE DEVICE WILL BE NEARLY 1/2 THE ORIGINAL LENGTH. ADVANTAGES: CONSUMER-CONTROLLED DELIVERY OF PUFFS AND NO ROD AROMA BEFORE USE.

KEYWORDS : SMOKELESS CIGARETTE; ENCAPSULATE; FLAVOR RELEASE; TUBE; SLIDE; MICROCAPSULE

PM NUMBER/DATE : D504

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Item 148

TITLE : ENCAPSULATION OF FLAVORANTS USING THE SOL-GEL PROCESS
INVENTOR(S) : SANDERS E B
ASSIGNEE : PHILIP MORRIS
ABSTRACT : IN THE SOL GEL PROCESS, HYDROLYSIS OF A METAL ALKOXIDE BY WATER LEADS TO A METAL OXYGEN BOND WHICH CAN DISPLACE AN ALKOXIDE ON A SECOND METAL TO GIVE A BRIDGED OXIDE.
KEYWORDS : SOL GEL; ENCAPSULATE; FLAVOR
PM NUMBER/DATE : D498

Item 149

TITLE : ELECTRICALLY HEATED AROMA DISPENSER
PATENT NUMBER : 3735704
PATENT COUNTRY : DE
INVENTOR(S) : KONIG R; BERGEN K
ASSIGNEE : ZERNISCH
ABSTRACT : THE DISPENSER COMPRISES A CHAMBER WITH A GAS RESERVOIR AND A PIEZOELECTRIC IGNITION DEVICE, THE FLAME FROM WHICH IS SITUATED CENTRALLY BELOW A W-SHAPED HEATING CHAMBER. THIS CAN MOVE AXIALLY AND IS ATTACHED TO A NEEDLE VALVE WHICH ENGAGES WITH AN ORIFICE IN A NOZZLE OF A CHAMBER CONTAINING A FLAVOR RELEASE COMPOUND. A SPRING IS USED TO PRESSURIZE THE AROMA MATERIAL. ALTERNATIVELY, THE AROMA MATERIAL MAY BE SUPPLIED TO THE HEATING ZONE AS A RIBBON WHICH IS WOUND BY A CASSETTE-TYPE MECHANISM. THE RIBBON MAY CONSIST OF MICROENCAPSULATED AROMA COMPOUNDS HELD BETWEEN TWO LAYERS OF METAL FOIL, OR A RECONSTITUTED TOBACCO SHEET IMPREGNATED WITH AROMA MATERIAL.
KEYWORDS : ELECTRICAL; NICOTINE RELEASE; INHALER; PRESSURIZED CARTRIDGE

Item 150

TITLE : MOUTHPIECES FOR CIGARETTES
PATENT NUMBER : 2210546
PATENT COUNTRY : GB
INVENTOR(S) : BOLT A J N; BASSETT D W
ASSIGNEE : IMPERIAL TOBACCO
ABSTRACT : CIGARETTES HAVING TUBULAR MOUTHPIECES OF PAPER, STYROFOAM, CARDBOARD, ETC., JOINED TO SHORTER TOBACCO RODS WHICH ARE MORE DENSELY PACKED. THE CIGARETTES ARE OF ACCEPTABLE PRESSURE DROP AND YIELD SIGNIFICANTLY LESS SIDESTREAM SMOKE ON SMOLDERING. UNLIKE THE MOUTHPIECES OF PAPIROSY CIGARETTES, THE MOUTHPIECES ARE ADAPTED IN VARIOUS WAYS TO COLLAPSE LONGITUDINALLY, TELESCOPE OR FRAGMENT. COMPRESSING CAN BE USED TO RELEASE FRAGRANCES WHICH MAY BE ENCAPSULATED IN THE MOUTHPIECE WALL TO MASK ODOR. MAY

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INCLUDE A FILTER. ALSO DISCLOSES A VERSION WITH NORMAL DENSITY AND SMOLDER RATE CONTROLLED BY A DISC.
KEYWORDS : VENTILATION; RTD; BURN RATE; FLAVOR RELEASE; AROMA RELEASE; BUTT; STUB; SLIDABLE; LENGTH; PACKING DENSITY; MOUTHPIECE

Item 151

TITLE : FIXED VOLATILE FLAVORS AND METHOD FOR MAKING SAME
PATENT NUMBER : 3787592
PATENT COUNTRY : US
INVENTOR(S) : MITCHELL W A; STAHL H D; SEIDEL W C
ASSIGNEE : GENERAL FOODS CORPORATION
ABSTRACT : ACETALDEHYDE FLAVORS ENTRAPPED IN SUGAR CRYSTALS TO FORM STORAGE STABLE FLAVOR RELEASE POWDERED MIX.
KEYWORDS : FOOD; BEVERAGE; ENCAPSULATE; FIX; SUCROSE; FLAVOR RELEASE; STORAGE STABLE

Item 152

TITLE : FIXED VOLATILE FLAVORS AND METHOD
PATENT NUMBER : 3898347
PATENT COUNTRY : US
INVENTOR(S) : MITCHELL W A
ASSIGNEE : GENERAL FOODS CORPORATION
ABSTRACT : FLAVORS ENCAPSULATED IN SUGAR CRYSTALLIZED FROM SUPERSATURATED AQUEOUS SOLUTION OF SUCROSE. USEFUL IN POWDERED BEVERAGE OR FOOD CONCENTRATE.
KEYWORDS : FLAVOR RELEASE; ENCAPSULATE; CRYSTAL; FIX

Item 154

INVENTOR(S) : LANZILLOTTI H V
ASSIGNEE : PHILIP MORRIS
ABSTRACT : METHOD TO ENHANCE AROMA PERCEPTION UPON OPENING OF A PACK OF CIGARETTES. APPLICATION OF ENCAPSULATED ODORANTS LOCATED ON THE SURFACE OF THE PACK CLOSURE BAND, IN SUCH A MANNER AS TO CAUSE THE CAPSULES TO BE RUPTURED WHEN THE POLY OVERWRAP IS REMOVED.
KEYWORDS : ENCAPSULATE; AROMA RELEASE
PM NUMBER/DATE : D325

Item 155

INVENTOR(S) : NICHOLS W A
ASSIGNEE : PHILIP MORRIS
ABSTRACT : ENCAPSULATION OF FLAVORANTS OR MULTICOMPONENT REACTIVE CHEMICAL SYSTEMS IN A CIGARETTE FILTER. RELEASE OF THE FLAVORANTS OR INITIATION OF THE CHEMICAL REACTION IS CONTROLLED BY THE SMOKER.
KEYWORDS : ENCAPSULATE; FLAVOR; FLAVOR RELEASE; RUPTURE
PM NUMBER/DATE : D302

Item 156

TITLE : TAMPER-EVIDENT PACKAGING
INVENTOR(S) : SOUTHWICK E W
ASSIGNEE : PHILIP MORRIS
KEYWORDS : TAMPER EVIDENT; PACKAGING; VISUAL; DYE; COLOR CHANGE; CHEMICAL REACTION; ENCAPSULATE
PM NUMBER/DATE : D356

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